

In the Specification

Amend the specification as follows:

Amend the paragraph beginning at page 3 line 22 as follows:

The above and other objects and advantages, which will be apparent to one of skill in the art, are achieved in the present invention which is directed to, in a first aspect, a method for controlling production or manufacturing costs by obtaining measurements of unit manufacturing for a multiplicity of products or production lines and having a started units number for a plurality of processes, which includes determining an approved units number for the plurality of processes. The method further includes determining a unit production cost for each ~~the unit~~ unit in the plurality of processes, calculating an unapproved units number for each ~~the process~~ process, calculating a cost of yield measurement for each of the plurality of processes by multiplying the unapproved units number by the unit production cost for ~~the each the unit~~ each unit; and comparing the cost for each unapproved unit for each ~~the~~ process.

Amend the paragraph beginning at page 4 line 5 as follows:

In a related aspect, the present invention includes providing an expected yield measurement for each of the plurality of processes, calculating an expected approved units number by multiplying the started units number by the expected yield measurement, calculating an actual yield for each of the plurality of processes, and providing a comparison of the cost of yield with the actual yield for ~~each the~~ each plurality of processes.

Amend the paragraph beginning at page 4 line 11 as follows:

In another aspect, the present invention provides a method for controlling production or manufacturing costs by obtaining yield measurements of unit manufacturing for a multiplicity of products or production lines having a plurality of processes which includes determining a started units number for the plurality of processes. The method further includes determining a cost per unit for each ~~the unit~~unit of the plurality of processes, calculating an expected approved units number for the plurality of processes by multiplying the started units number by an expected yield measurement, calculating an actual approved units number for each of the plurality of processes by multiplying the started units number by an actual yield measurement, calculating an unapproved units number for each of the plurality of processes by subtracting the expected approved units number from the actual approved units number, calculating cost of yield measurements for the plurality of processes by multiplying the unapproved units number by the cost per unit, and providing a comparison of the cost of yield measurements for the plurality of processes.

Amend the paragraph beginning at page 5 line 3 as follows:

In yet another aspect, the present invention provides a method for controlling and improving production or manufacturing costs by obtaining yield measurements of unit manufacturing for a multiplicity of products or production lines having a plurality of processes, which includes determining an initial started units number for the plurality of processes. The method further includes determining a cost per unit number for each ~~the~~unitunit of the plurality of processes, calculating an actual yield measurement by dividing

an initial approved units number by the initial started units number for each of the plurality of processes, providing a comparison of the actual yield measurement for the plurality of processes, and calculating expected yield measurements by dividing an expected approved units number by the initial started units number for each of the plurality of processes. The method also includes providing a comparison of the expected yield measurements for the plurality of processes, calculating an initial actual approved units number for the plurality of processes by multiplying a subsequent started units number by the actual yield measurement, and calculating subsequent expected approved units numbers for the plurality of processes by multiplying the subsequent started units numbers by the expected yield measurement. The method further includes, calculating cost of yield measurements for the plurality of processes by multiplying the subsequent expected approved units number by the cost per unit, and providing a comparison of the cost of yield measurements for a plurality of processes.

Amend the paragraph beginning at page 6 line 6 as follows:

In yet another aspect, the present invention provides a method for controlling production or manufacturing costs by obtaining and comparing measurements of unit manufacturing costs for production or manufacturing of a plurality of products or production lines determining a started units number for each of a plurality of processes, determining an approved units number for each of the plurality of processes, determining a unit production cost for each ~~the unit of each~~ the unit of each process, and calculating an unapproved units number by subtracting the units started number from the approved units number. The method further provides calculating cost of yield measurement for

each of the plurality of processes by multiplying the unapproved units number by the unit production cost for each of the plurality of processes, and providing a comparison of the cost of yield measurement for each of the plurality of processes.

Amend the paragraph beginning at page 6 line 27 as follows:

In yet another related aspect, the present invention provides calculating a target yield measurement, and providing a comparison of the target yield measurement for each of the plurality of processes.

[new paragraph] In still another related aspect, the present invention provides the plurality of processes run simultaneously.

Amend the paragraph beginning at page 7 line 4 as follows:

In still another aspect, the present invention provides a method for controlling and improving production or manufacturing costs by obtaining and comparing yield measurements of unit manufacturing for a plurality of products or production lines which includes determining a started units number for each of a plurality of processes, determining an approved units number for each of the plurality of processes, determining a unit production cost for each ~~the unit of each the~~ unit of each process, and calculating an actual yield measurement by dividing the approved units number by the started units number for each of the plurality of processes. The method further includes providing a comparison of the actual yield measurements for each of the plurality of processes, calculating a number of unapproved units by subtracting the started units number from the approved units number, calculating cost of yield measurement for each of the plurality of processes by multiplying the number of unapproved units by the unit production cost for

each unit, and providing a comparison of the cost of yield measurement for each of the plurality of processes.

Amend the paragraph beginning at page 7 line 26 as follows:

In yet another related aspect, the present invention provides determining a sale cost of each ~~the unit for each the~~ unit of each process, calculating cost of lost sales for each of the plurality of processes by multiplying the number of unapproved units by the sale cost for each unit, and providing a comparison of the cost of lost sales for each of the plurality of processes.

Amend the paragraph beginning at page 8 line 3 as follows:

In still another aspect, the present invention provides a computer program product for controlling production or manufacturing costs by obtaining measurements of unit manufacturing for a multiplicity of products or production lines and having a started units number for a plurality of processes, which includes computer readable program code means for determining an approved units number for the plurality of processes, and computer readable program code means for determining a unit production cost for each ~~the unit~~ unit in the plurality of processes. The computer program further includes computer readable program code means for calculating an unapproved units number for ~~each the~~ process, computer readable program code means for calculating a cost of yield measurement for each of the plurality of processes by multiplying the unapproved units number by the unit production cost for ~~the each the~~ unit, and ~~computer~~ each unit, and computer readable program code means for comparing the cost for each unapproved unit for each the process.

Amend the paragraph beginning at page 8 line 17 as follows:

In another aspect, the present invention provides a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform steps for controlling production or manufacturing costs by obtaining measurements of unit manufacturing for a multiplicity of products or production lines and having a started units number for a plurality of which includes determining an approved units number for the plurality of processes, and determining a unit production cost for each-the-unit unit in the plurality of processes. The program storage device further includes calculating an unapproved units number for each-the-process process, calculating a cost of yield measurement for each of the plurality of processes by multiplying the unapproved units number by the unit production cost for the each-the-unit, unit, and comparing the cost for each unapproved unit for each-the-process process.

Amend the paragraph beginning at page 10 line 3 as follows:

Referring to Figure 1, a flow chart 10 generally describing the steps of a preferred embodiment of the present invention is shown. The method is started 12 by identifying the process or processes used to make each of a plurality of products 14. Then, identify the incremental cost added to each product by each process identifying the cost per unit of the product produced 16. Next, identify the expected number of good-parts- parts 18 generated for a given number of started parts for each process of each-product product. This number is the "expected yield" for each product through each-process process. Then, identify the quantity of each product started in a given time period (e.g. Daily, Weekly, Month to Date, etc.) in each process for that particular product 20. Next, identify

the quantity of goods or approved finished units of each product in each process in the same time period 22. Then, compute the actual yield of each product in each process by dividing the number of good or approved finished units by the total number of units started 24. After that, determine the "Yield Delta" by subtracting the actual yield for each product in each process from the expected yield for each product in each process 26.

Amend the paragraph beginning at page 10 line 18 as follows:

Next, multiply the "Yield Delta" by the number of parts started for each product for each process 28. This represents the number of additional parts that would have to be started to get the expected number of good parts out of each process, for each ~~product~~ 28. ~~product~~. This assumes that the actual yield is below the expected one. If the actual yield is above the expected yield, this number is negative, and represents the number of extra good parts finished above the number expected.

Amend the paragraph beginning at page 10 line 24 as follows:

Subsequently, multiply the unit costs (step-16) by the result of multiplying the yield data by the number of parts started for each product and process (step-28). The result is a dollar value representing the "Cost of Yield" for each process step for each product. This information can be used to effectively prioritize which products in which process steps are impacting the plant the most, and which should be addressed first.

Amend the paragraph beginning at page 10 line 24 as follows:

Subsequently, multiply the unit costs (step-16) by the result of multiplying the yield data by the number of parts started for each product and process (step-28). The result is a dollar value representing the "Cost of Yield" for each process step for each product. This

information can be used to effectively prioritize which products in which process steps are impacting the plant the most, and which should be addressed first.

Amend the paragraph beginning at page 11 line 14 as follows:

The computer contains a relational database, or access to a relational database. This database holds all the collected yield information as well as, ~~the~~ as the unit costs of each product for each process it sees, and the expected yield for each product in each process. The relational database can be queried to retrieve specific data as required to compute the cost of yield.

Amend the paragraph beginning at page 12 line 16 as follows:

Referring to Figs. 2 and 3, embodiments are shown of charts ~~depicted~~ depicting the benefits of the present invention. The ~~charts shown~~ chart shown in Fig. 2 displays a yield management chart 100 before implementing cost of yield measurements. Column "A" lists the five products "A-E" which processes will be monitored. Column "B" indicates for each product how many parts are started, beginning with product "A" having 100 parts, and ending with product "E" starting with 75 parts. Then, all the parts are processed 102, going through their individual processing in the production plant. Next, column "C" shows the amount of parts that have been processed and are still good, starting with product "A" having 89 good parts, and ending with product "E" having 64 good parts. Column "D" shows the yield of each product and column "E" shows the expected yield or the plan for what yield would be acceptable. Column "F" shows the difference of the expected yield versus the actual yield shown in columns "D" and "E".

Amend the paragraph beginning at page 13 line 18 as follows:

As can be seen, referring to Figs. 2 and 3, the cost of yield is very different from the lowest yield product. The lowest yield product calculation does not show how much value that product possesses. Where value is the total cost of the product's delta between yield "D" and plan "E". Whereas, in Fig. 3, the chart 200 shows the products costing the business the most money may not be the lowest yielding products. Thus, even though product "B" has a higher yield (0.88), than product "E" (0.85), product "B" has a higher loss in dollars, at \$5.00 than product "E" at, \$2.00. Thus, the company using these calculations would concentrate resources on the production lines "B" and "D" since these ~~are the-~~ are costing the company the most money in lost yield, and improving the yield for these products adds the most value in dollars to the company's profit.